CPTO 8/17/04

1. A method of marking an original text document,

said original text document comprising words separated by inter-word intervals,

said inter-word intervals including one or more blank characters having numbers, said numbers being altered,

said method of altering said numbers of said blank characters, comprising the steps of:

applying a reversible transform over said original text document in order that all said inter-word intervals become exclusively comprised of odd numbers of said blank characters;

splitting and transforming said original text document into a first subset and a second subset of said words including trailing blanks of said inter-word intervals of said words;

and, over said first subset:

computing from said original text document and a secret-key, an authentication pattern that fits the number of said intervals of said first subset;

adding inter-word blank characters in positions corresponding to said authentication pattern;

generating a canonical form of said first subset;

computing, from said canonical form of said first subset and said secret-key, a blurring pattern that fits the number of said intervals of said first subset;

modifying the numbers of inter-word blank characters according to said blurring pattern

and, over said second subset:

generating canonical form of said second subset;

computing, from said canonical form of said second subset and said secret-key, a blurring pattern that fits the number of said intervals of said second subset;

modifying the numbers of inter-word blank characters according to said blurring pattern;

recombining said first subset and said second subset

thereby, obtaining a marked text for authentication.

2. A method of authenticating a marked text document, said marked text document comprising words separated by inter-word intervals, said inter-word intervals including one or more blank characters having numbers which are checked, said method comprising checking the numbers of said blank characters utilizing the steps of:

splitting said marked text document into a first subset and a second subset of said words including trailing blanks of said inter-word intervals of said words;

and, over said first subset:

generating a canonical form of said first subset;

computing from said canonical form of said first subset and a secret-key a blurring pattern that fits the number of said intervals of said first subset;

erasing modifications brought to the numbers of said inter-word blank characters per said blurring pattern;

extracting an authentication pattern thereby, obtaining in all said inter-word intervals, odd numbers of blank characters;

and, over said second subset:

generating canonical form of said second subset;

computing from said canonical form of said second subset and said secret-key a blurring pattern that fits the number of said intervals of said second subset;

erasing modifications brought to the numbers of said inter-word blank characters per said blurring pattern thereby, obtaining in all said inter-word intervals, odd numbers of blank characters ;

recombining said first subset and said second subset;

applying a reverse transform thus retrieving said original text document;

computing from retrieved, said original text document

and said secret-key an authentication pattern that fits the number of said intervals

of retrieved said original text document ;

comparing extracted said authentication pattern

and computed said authentication pattern;

if matching exactly, accepting said marked text document as authentic;

if not:

rejecting said marked text document as fake.

3. The method defined in claim 2 wherein splitting steps includes the preliminary steps of: generating a canonical form of a text document; computing, from said canonical form of said text document and said secret-key, a splitting pattern that fits the number of said intervals of said text document; thereby, allowing to split and to recombine said text document on the basis of asserted and non-asserted bits of said splitting pattern.

4. The method defined in claim 3 wherein said authentication pattern, said blurring pattern and said splitting pattern are binary vectors comprising a number of bits matching the number of said inter-word intervals.

5. The method defined in claim 4 wherein said canonical form is obtained in stripping all blank characters, in excess of one, off said inter-word intervals.

6. The method defined in claim 5 wherein modifying steps include:

in the positions corresponding to the asserted bits of said blurring patterns:

adding one blank character if said inter-word intervals comprise of an odd number of said blank characters; and

removing one blank character if said inter-word intervals comprise an even number of said blank characters.

7. The method defined in claim 6 wherein modifying steps and erasing steps are performed identically.

8. The method defined in claim 7 wherein extracting step includes removing one blank character in those of said inter-word intervals that are comprised of an even number of said blank characters;
obtaining a binary authentication vector with asserted bits corresponding to positions where said blank characters were removed.

Claims 9 and 10 are cancelled